

Work Order ID 119044

119044

Page 1

May-06-14 8:10:27 AM

D3439-101
B119044

Item ID: D3439-101

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Mirror Assembly 8"

Start Date: 5/12/14 Start Qty: 20.00

20

Cust Item ID:

Required Date: 5/12/14 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 4-05-07 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3439	Rev B								

100 PURCHASING 0.00
100
 Purchasing Memo 0.00
 Purchasing Issue P/O: 24129
 For Grote Mirror P/N: 12183
 Possible Supplier: UAP/NAPA
 Material release note is required

CL 14/05/08 20

110 Receive & Inspect for Damage & Mat'l Certs 0.00
110
 Packaging Memo 0.00
 Packaging Ensure Material Release Note is attached

14/05/08 (20)

115 QC6- Inspect dimensions to drawing 0.00
115
 QC Memo 0.00
 Quality Control

DAS

27

9-89

14/5/12

20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube <input type="checkbox"/></td> <td style="width:15%;">Crosstube <input type="checkbox"/></td> <td style="width:15%;">Water Jet <input type="checkbox"/></td> <td style="width:15%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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DQA: _____ Date: _____



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Work Order ID 119044***119044***

Page 3

May-06-14 8:10:27 AM

Item ID: D3439-101

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Mirror Assembly 8"

Start Date: 5/12/14 Start Qty: 20.00

20

Cust Item ID:

Required Date: 5/12/14 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Identify as per dwg & Stock Location: **ST381**

0.00

140

Packaging

Memo

0.00

Packaging

20x 14-7-14**DAB
28
9-89**

150

QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.00

Quality Control

115 14-07-16**14-7-14**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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FAULT CATEGORY

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Picklist Print

May-06-14 8:10:26 AM

Page 1

Work Order ID: 119044

119044

Parent Item: D3439-101

D3439-101

Parent Item Name: Mirror Assembly 8"

Start Date: 5/12/14

Required Date: 5/12/14

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP A05.07.20New issueKJ/JLM
per dwg RevB DD verf:ec

IPP Rev:B 10.09.08

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
12183		Purchased	No			120	Each	0.0000	1	20			
12183									**				
Grote Mirror													
D3015-3		Manufactured	No			120	Each	90.0000	1	20			
D3015-3									**				
Locknut													
				<u>Location</u>				<u>Loc Qty</u>					
				FG				18					
				95758				8					
				96151				10					
				ST023				72					
				111465				72					
D3439-3		Manufactured	No			120	Each	63.0000	1	20			
D3439-3									**				
Stud													
				<u>Location</u>				<u>Loc Qty</u>					
				GA				63					
				103874				1					
				104850				22					
				109099				40					
NAS1149C0563R		Purchased	No			120	Each	212.0000	1	20			
NAS1149C0563R									**				
Washer													
				<u>Location</u>				<u>Loc Qty</u>					
				ST292				212					
				m125928				212					

119044 6/14/14
14/07/14
DAS 36 989

14/07/14
DAS 36 989

14/07/14
DAS 36 989

20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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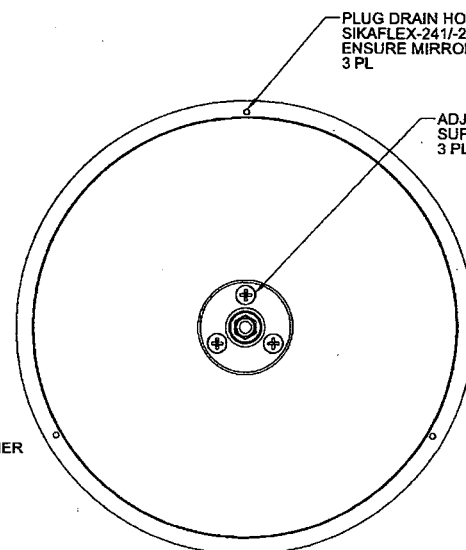
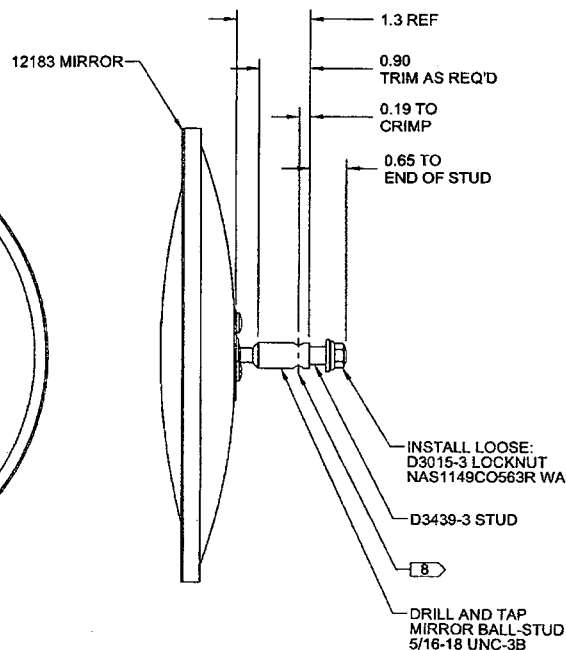
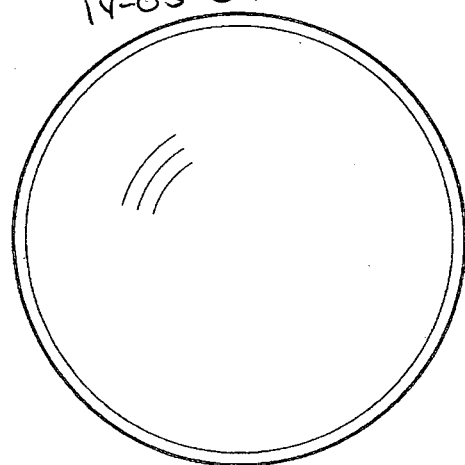
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FAULT CATEGORY

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SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
NO. 119044 MJS
14-05-07



D3439-101 MIRROR ASSEMBLY

NOTES:

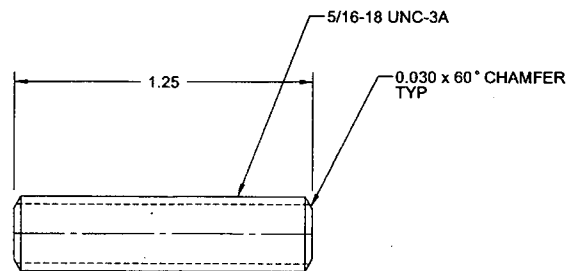
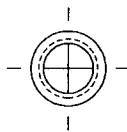
- 1) MATERIAL: MIRROR= 8" ROUND CONVEX MIRROR W/ STAINLESS STEEL CASE
CENTER-MOUNT BALL-STUD W/ 1/4-20 X 1" DEEP FEMALE THREAD
GROTE INDUSTRIES, 2600 LANIER DRIVE, MADISON, INDIANA 47250
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3439-101" USING REMOVEABLE TAG
- 7) WEIGHT: 1.18 lbs
- 8) TO INSTALL D3439-3 STUD:
 - APPLY LOCKTITE 262 TO THREADS BEING INSTALLED INTO MIRROR BALL-STUD
 - THREAD D3439-3 STUD INTO MIRROR BALL-STUD
 - CRIMP MIRROR BALL-STUD ON OPPOSING SIDES, 0.19 FROM END AS ILLUSTRATED USING TOOL DT8317
 - CRIMP TO DEPTH OF 0.015-0.030 USING R0.125


ITEM	QTY	P/N	DESCRIPTION
1	X	D3439-101	MIRROR ASSEMBLY, 8"
2	1	12183	MIRROR 8" (GROTE)
3	1	D3015-3	LOCKNUT
4	1	D3439-3	STUD
5	1	NAS1149CO563R	WASHER (OR AN960JD516)

RELEASED
2010-09-07

B	REDRAW, ADD -3 (WAS PURCHASED/TRIMMED BOLT), RMV LPS	CP	10.07.20
A	NEW ISSUE	CP	05.05.27
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.07.20		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3439	REV. B
TITLE MIRROR ASSEMBLY	SHEET 1 OF 2
SCALE NTS	
COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	







D3439-3 STUD 

NOTES:

- 1) MATERIAL: AISI 303 STAINLESS STEEL ROUND BAR PER ASTM A582
REF DART SPEC M303R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.03 lbs

RELEASED
2010-09-07

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3439	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		MIRROR ASSEMBLY	NTS
DATE	10.07.20	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO24129**

Purchase Order Date ~~5/8/2014~~

PO Print Date 5/8/2014

Page Number 2 of 3

Order From :

VC-BCI001

B C INDUSTRIAL
14 OLD FOREST
KIRKLAND, QUEBEC H9J 2Z8

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 514-585-8907

Ship To Contact

Ship To Phone

Ship Via: FedEx PI collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

CAD

FOB

FCA - (Free Carrier)

Line Total: \$141.60

Deliver To: DAN.P

4	12183	Grote Mirror	5/14/2014	20.00	\$19.99	\$399.80
			Yes	Each		
			5/14/2014			

AS PER DWG D3439 REV. B
B119044

NOTE: PROCUREMENT QUALITY CLAUSES REQUIRED FOR LINE 4 AND 5

Line Total: \$399.80

5	658-065	Washer	5/14/2014	200.00	\$0.49	\$98.00
			Yes	Each		
			5/14/2014			

AS PER DWG D3904 REV. B
B118903

Line Total: \$98.00

Note:

5/8/2014

BC Industrial..... 14 Old Forest....Kirkland....Quebec....H9J-2Z8....Canada
Phone 514-585-8907 Email bcpc1@sympatico.ca

Certificate of Compliance

May 9 2014

Dart Aerospace
1270 Aberdeen
Hawkesbury, Quebec
K6A-1K7

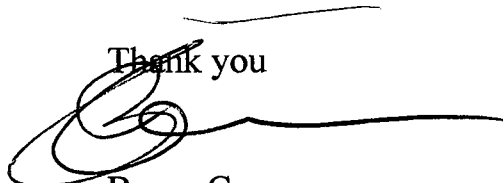
ATT: Chantal Lavoie

This is to confirm that the parts delivered on our PS 140509DA

Grote mirror #12183	PO line item 4
washers 658-065	PO line item 5

conforms to the specifications outlined on your purchase
order 24129

Thank you



Bryan Cameron

#TPS/GST-142640622
#TVQ/PST-1021696907

Terms 2%10 Net 30